

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/032920 A3

(51) International Patent Classification⁷: **B62D 57/024**

(21) International Application Number:
PCT/US2004/032846

(22) International Filing Date: 6 October 2004 (06.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/680,745 7 October 2003 (07.10.2003) US

(71) Applicant (for all designated States except US): **INTERNATIONAL CLIMBING MACHINES [US/US]**; 969 East Shore Drive, Ithaca, NY 14851 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MAGGIO, Samuel, J.** [US/US]; 19 West Park Row #4, Clinton, NY 13323 (US).

(74) Agent: **FAJKOWSKI, James, E.**; Testa, Hurwitz & Thibault, LLP, High Street Tower, 125 High Street, Boston, MA 02110 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

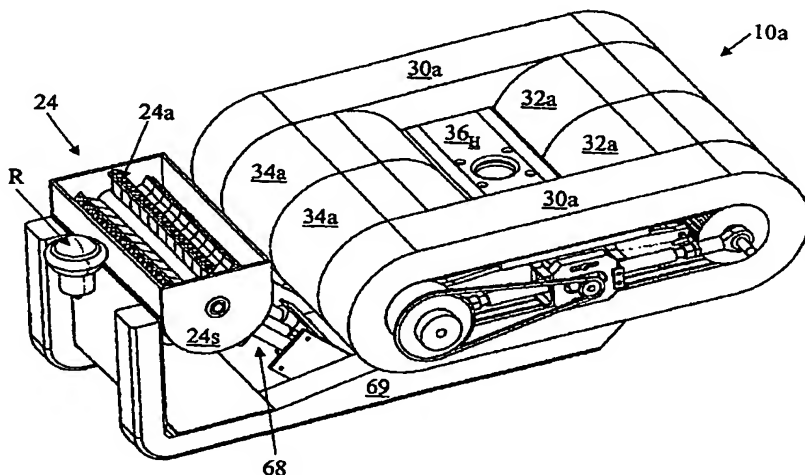
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: **SURFACE TRAVERSING APPARATUS**



(57) Abstract: The invention concerns a surface traversing apparatus that includes a frame, a seal having a seal perimeter that is mounted to the frame, and a drive configured to move the apparatus relative to the surface. The seal perimeter is adapted substantially for rolling contact with the surface to be traversed. The device is capable of suction adhering and moving along horizontal, vertical, inverted surfaces and the like, and overcoming obstacles or surface irregularities while maintaining suction adhesion to the surface. The device can be propelled along the surface with a locomoting rolling seal assembly, which provides both a seal to affect the vacuum adhesion and the locomotion to drive the device across the surface.



WO 2005/032920 A3



(88) Date of publication of the international search report:
26 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.